

THE STATUS OF *OBOLARIA VIRGINICA* L. (GENTIANACEAE) IN TEXAS
AND SURROUNDING STATES

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ABSTRACT

A recent find of *Obolaria virginica* L. from southeastern Texas led to a review of the status of this species in Texas and surrounding states.

KEY WORDS: *Obolaria virginica* L., Texas, Gentianaceae

Obolaria virginica L., Pennywort, a northeastern species, reaches its western limit in southeastern Texas (Correll & Johnston 1970; Johnston 1990; Hatch *et al.* 1990; Jones *et al.* 1997). It is not known from Oklahoma (Taylor & Taylor 1989). In Arkansas it occurs only in several east central counties (Smith 1988), and in Louisiana it is reported from fifteen parishes (Thomas & Allen 1998; MacRoberts & MacRoberts 1995).

Obolaria, a monotypic genus, and *Bartonia* are the only saprophytic genera of the Gentianaceae found in North America (Maas 1986). *Obolaria virginica* is found chiefly in deciduous forests but is also found in rich woods, river banks, mixed hardwood slopes, and bottom lands (Andreas 1970; Brown 1972; Gillet 1959; MacRoberts & MacRoberts 1995; Hammond-Soltis 1979). It is said to be common in rich mesic woods throughout the piedmont and mountainous areas in the southeastern United States (Kondo 1970). It is easily overlooked in the early stages of growth (Brown 1972).

On February 4, 1998 while searching for *Cardamine concatenata* (Michx.) Sw., *Sanguinaria canadensis* L., and *Uvularia perfoliata* L., I found *Obolaria virginica* growing in a side slope of a beech-hardwood community in the Angelina National Forest in Angelina County. It was located within four meters of a dry, shallow, undeveloped side drain of a larger system. The overstory and midstory species in this site were *Quercus alba* L., *Q. michauxii* Nutt., *Fagus grandifolia* Ehrh., *Ostrya virginiana* (P. Mill.) K. Koch, *Magnolia grandiflora* L., *Ilex opaca* Ait., *Acer barbatum* Michx., and *Pinus taeda* L. This appears to be the remnants of perhaps a once larger hardwood community that was reduced when the surrounding area was cut and replanted with loblolly pine, in some areas as close as seven meters to the drain.

The duff layer was quite thick and ground cover species found at the time were limited to *Michella repens* L. and *Sanicula* sp. *Corallorhiza wisteriana* Conrad, another uncommon species in east Texas, was also found near the site.

This type of community has been described in east Texas, where it reaches its southwestern limit, by McLeod (1972), Diamond *et al.* (1987), Marks & Harcombe (1981), Nixon *et al.* (1980), MacRoberts & MacRoberts (1997). Through restoration, protection, and improvement, the U.S. Forest Service hopes to achieve a target of 3500 acres of this community in the National Forests and Grasslands in Texas (NFGT). Currently NFGT claims to have about 2500 acres of beech-white oak forest in its holdings (USDA 1996a).

I surveyed numerous herbarium collections (TEX, NO, BRIT, ASTC, LTU, SFRP, LSU, NLU, DUR) for *Obolaria* from Texas. GH, MICH, and MO have no specimens of *Obolaria* from Texas (J. Pringle, pers. comm.). Only two specimens were found. One is from Jasper County and the other from Sabine County, both in southeastern Texas. It has been recently reported that a new county record has been found and a new location was found in an earlier documented county (W. Holmes, pers. comm.), but the information has not been released. Although MacRoberts & MacRoberts (1995) located *O. virginica* in a similar habitat in the Kisatchie National Forest in Louisiana, floristics of beech-hardwood sites in the Sabine National Forest in Texas did not include the species (MacRoberts & MacRoberts 1997).

While *Obolaria virginica* is not on the state rare species list, it is eligible for listing as it is only known from three sites, fewer than six occurrences being classified as S1, (*i.e.*, critically imperiled in Texas and especially vulnerable to extirpation from the state). Beech-Hardwood Forest is rare in east Texas. The Texas Organization for Endangered Species (TOES) lists it as a threatened community and the Texas Natural Heritage Program lists it as imperiled. The U.S. Forest Service lists this community as sensitive, although it has no listing for *O. virginica* (USDA 1996b).

The distribution of *Obolaria virginica* in Arkansas, Louisiana, Oklahoma, and Texas is shown in Figure 1. Documentation is given for only Louisiana and Texas.

DOCUMENTATION

LA: Bienville Parish, *Thomas 6666* [NLU]. Caldwell Parish, *Marx 474* [LTU]; *Thomas 38170* [LTU]; *Thomas 51173* [LTU]. Catahoula Parish, *Thomas 127* [NLU]; *Thomas 128* [NLU]. Claiborne Parish, *Lewis 129* [NLU]; *Lewis 2650* [NLU]. Grant Parish, *Parker 570* [NLU]. Lincoln Parish, *Pavlu 501* [LTU]. Morehouse Parish, *Pias & Thomas 49776* [LSU]; *Thomas 12936* [NLU]; *Thomas 58135* [NLU]. Natchitoches Parish, *Holmes 4424* [NLU]. Ouachita Parish, *Thomas 13906* [NLU]. Rapides Parish, *Carr, MacRoberts, & MacRoberts 2168* [VDB]; *MacRoberts & MacRoberts 2254* [SFRP]. St. Helena Parish, *Allen 15593* [LSU]. Webster Parish, *Price s.n* [NLU]. W. Feliciana Parish, *Cocks s.n* [NO]; *Penfound s.n* [NO]. Winn Parish, *Parker 588* [NLU].

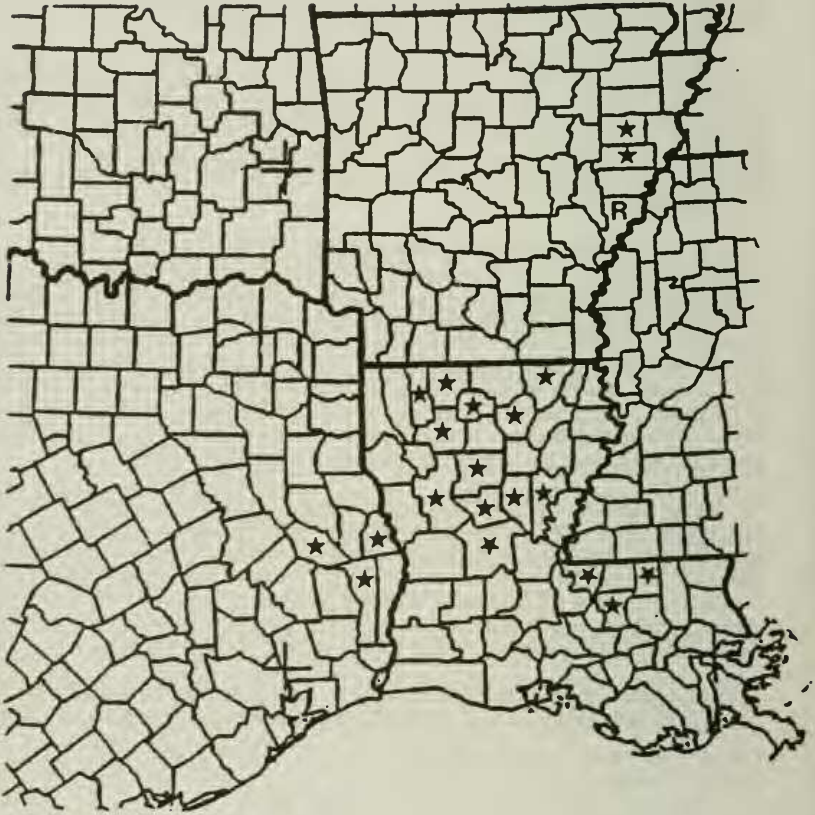


Figure 1. Distribution of *Obolaria virginica* in Arkansas, Louisiana, Oklahoma and Texas.
R = Reported.

TX: Angelina Co., *Walker 136* [TEX]. Jasper Co., *Lundell 13368* [TEX]. Sabine Co., *Correll & Correll 24883* [TEX].

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